AMENDMENTS TO THE CLAIMS

Claim 1 (Previously Presented): A process for mask-free localized grafting of organic molecules, which are capable of being electrically activated, onto a composite surface comprising conductive and/or semiconductive areas that are materials of different nature, the process comprising

placing said organic molecules in contact with said composite surface; and

electrochemically grafting an insulating film of said organic molecules on chosen, defined areas of said conductive and/or semiconductive areas by bringing said chosen, defined areas to a potential higher than or equal to a threshold electrical potential, which is determined relative to a reference electrode, and above which grafting of said organic molecules takes place.

Claim 2 (Previously Presented): The process as claimed in claim 1, in which the composite surface comprises materials the nature of which differs in at least one of electronic work function under vacuum, surface solvation with an electrolysis solvent, and Brönsted activity in the electrolysis solvent.

Claim 3 (Canceled)

Claim 4 (Previously Presented): The process as claimed in claim 1, in which the composite surface comprises a semiconductive surface.

Claim 5 (Previously Presented): The process as claimed in claim 1, in which the composite surface comprises a silicon surface onto which is deposited another semiconductor.

Claim 6 (Previously Presented): The process as claimed in claim 1, in which the composite surface comprises a surface comprising a semiconductor and a metal.

Claim 7 (Previously Presented): The process as claimed in claim 1, in which the composite surface comprises a surface comprising two different metals.

Claim 8 (Previously Presented): The process as claimed in claim 1, in which the composite surface comprises a surface obtained by effecting contact between a conductive or semiconductive object and a conductive or semiconductive surface.

Claim 9 (Original): The process as claimed in claim 8, wherein the object is a nanoobject.

Claim 10 (Original): The process as claimed in claim 9, wherein the nanoobject is a nanotube.

Claim 11 (Previously Presented): The process as claimed in claim 1, in which said composite surface comprises a surface comprising silicon and gold or a surface comprising silicon dioxide and gold.

Claim 12 (Previously Presented): The process as claimed in claim 1, in which said organic molecules include electrocleavable molecules.

Claim 13 (Previously Presented): The process as claimed in claim 12, in which said electrocleavable molecules are chosen from diazonium salts, phosphonium salts, sulfonium salts, carboxylic acid salts, aryl acetates, aliphatic alcohols and amines.

Claim 14 (Previously Presented): The process as claimed in claim 12, in which said organic molecules include electrograftable molecules chosen from

vinyl monomers of formula B-R-A, in which R is a group bearing a vinyl double bond, A is an electron-withdrawing or electron-donating functional group, and B is any functional group;

molecules comprising at least one strained ring;

functionalized monomers derived from said vinyl monomers and said molecules comprising at least one strained ring; and

mixtures of said vinyl monomers and said molecules comprising at least one strained ring.

Claim 15 (Previously Presented): The process as claimed in claim 14, in which each of said vinyl monomers is selected from the group consisting of acrylonitrile, methacrylonitrile, para-chlorostyrene, 4-vinylpyridine, alkyl methacrylates, and cyano acrylates.

Claim 16 (Previously Presented): The process as claimed in claim 14, in which each of said vinyl monomers is selected from the group consisting of 4-vinylpyridine and N-vinyl-pyrrolidone.

Claim 17 (Previously Presented): The process as claimed in claim 14, in which said molecules comprising at least one strained ring comprise a molecule which may be opened by nucleophilic or electrophilic attack.

Claim 18-19 (Canceled)

Claim 20 (Previously Presented): The process as claimed in claim 1, in which the insulating film of said organic molecules is subsequently functionalized or modified to change the chemical, physical, optical or magnetic properties of the film.

Claim 21 (Previously Presented): The process as claimed in claim 20, in which the insulating film of said organic molecules is a film of electrografted polyacrylonitrile which is subsequently cured and made electrically conductive.

Claim 22 (Previously Presented): The process as claimed in claim 20, in which the insulating film of said organic molecules is subsequently doped with silver salts.

Claim 23 (Previously Presented): The process as claimed in claim 1, in which

said organic molecule is methacrylonitrile and

the grafting is performed by using a potential scan over said surface with a threshold potential from -2.3 to -2.8 V/(Ag^+/Ag).

Claim 24 (Previously Presented): The process as claimed in claim 1, in which the composite surface is chosen from

the surfaces of microelectronic circuits, and

the surfaces of microfluidics devices, of micromechanical components and of fine jewelry components.

Claims 25-32 (Canceled)

Claim 33 (Previously Presented): The process as claimed in claim 1, wherein the conductive and/or semiconductive areas of the composite surface differ in at least one of electronic work function under vacuum, surface solvation with an electrolysis solvent, and Brönsted activity in the electrolysis solvent.

Claim 34 (Previously Presented): The process as claimed in claim 1, wherein the conductive and/or semiconductive areas of the composite surface are co-planar.

Claim 35 (Currently Amended): ~~The~~ A process ~~as claimed in claim 1~~ for mask-free localized grafting of organic molecules, which are capable of being electrically activated, onto a composite surface comprising conductive and/or semiconductive areas that are materials of different nature, the process comprising

placing said organic molecules in contact with said composite surface; and

electrochemically grafting an insulating film of said organic molecules on chosen, defined areas of said conductive and/or semiconductive areas by bringing said chosen, defined areas to a potential higher than or equal to a threshold electrical potential, which is determined relative to a reference electrode, and above which grafting of said organic molecules takes place, wherein

the composite surface is formed by a polycrystalline material; and

each of the conductive and/or semiconductive areas of the composite surface is a face of a different monocrystal of the polycrystalline material.